

FOR PUBLICATION

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

In re:	:	Bankruptcy No. 01-10578 (RTL)
	:	
FEDERAL-MOGUL GLOBAL INC.,	:	
T&N LIMITED, <i>et al.</i> ,	:	
	:	
Debtors.	:	
<hr/>		
THE OFFICIAL COMMITTEE OF	:	
ASBESTOS CLAIMANTS and	:	
ERIC D. GREEN, as the	:	
LEGAL REPRESENTATIVE FOR	:	
FUTURE ASBESTOS CLAIMANTS,	:	
	:	
Plaintiffs,	:	
	:	
v.	:	Civil Action No. 05-59 (JHR)
	:	
ASBESTOS PROPERTY DAMAGE	:	
COMMITTEE,	:	
	:	
Defendant.	:	OPINION

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TABLE OF CONTENTS

I. Introduction

II. Findings of Fact

- A. T&N's Liability in the United States
 - 1. Limpet
 - 2. Keasbey
 - 3. Raw Fiber
 - 4. United Kingdom Finished products
- B. T&N's Liability in the United Kingdom
- C. Medical Evidence on Asbestos Related Disease

- D. T&N's Litigation Experience in the United States
 - 1. Pre-1985
 - 2. The Asbestos Claim Facility
 - 3. The Center for Claims Resolution
 - 4. Post-CCR
- E. T&N's Litigation Experience in the United Kingdom
- F. Estimations of Liability
 - 1. Pending United States Claims
 - 2. Settlement Averages and Dismissal Rates
 - 3. Future United States Claims
 - 4. Aggregate United Kingdom Liability
- G. Plaintiffs' Criticisms of Dr. Cantor's Methodology
- H. Defendant's Criticisms of Dr. Peterson's Methodology

III. Conclusions of Law

- A. Procedural History and Jurisdiction
- B. English Law Considerations
- C. Estimation in Bankruptcy
 - 1. Purpose of an Estimation
 - 2. Method of the Estimation
- D. T&N' Liability for Asbestos Personal Injury Claims
 - 1. Number of Pending and Future United States Claims
 - 2. Settlement Averages for United States Claims
 - 3. Aggregate Liability in the United Kingdom
 - 4. Interest and Inflation
 - 5. Conclusion

I. INTRODUCTION

This case comes before the Court as a contested matter on the estimation of the aggregate present value of pending and projected future asbestos personal injury and wrongful death claims asserted against Turner & Newall Limited, a United Kingdom company, and its non-United States subsidiary companies (collectively "T&N"). The Court has reviewed the briefs and supporting materials filed by the Official Committee of Asbestos Claimants ("ACC") and Eric D. Green, as the legal representative for the future

asbestos-related personal injury claimants (collectively the “Plaintiffs” or “Personal Injury Claimants”) and the Asbestos Property Damage Committee (“Defendant” or “PD Committee”)¹, has considered the arguments of all interested parties, and has heard and weighed the testimony of fact and expert witnesses who testified during the five (5) day trial beginning on June 14, 2005, as well as the evidence admitted at the Estimation Hearing.²

On June 30, 2005 the parties filed proposed Findings of Fact and Conclusions of Law. On July 14, 2005, the Court heard and considered closing arguments and questioned the parties on their respective arguments and evidence. In addition, the Court received Response Briefs from each party that sought to dispute aspects of their adversary’s Findings of Fact and Conclusions of Law. Furthermore, the estimation was a contested matter under Fed. R. Bankr. P. 9014. As such the Court takes judicial notice of the entire docket in the bankruptcy cases. See In re Indian Palms Assocs., Ltd., 61 F.3d 197 (3d Cir. 1995). Therefore, in accordance with Fed. R. Civ. P. 52, the following represents the Court’s Findings of Fact and Conclusions of Law.

¹ The PD Committee consists of five members: Anderson Memorial Hospital, Jacksonville College, Moxie Real Estate, Richard Blyth, and the Hill School. The PD Committee represents the interests of approximately 3,200 municipalities, school districts, hospitals, businesses, and individuals who own and operate buildings where T&N manufactured asbestos products were installed, and have filled proofs of claim for damages.

² Neither the Debtors, nor any of the Official Committees in the Chapter 11 proceeding, the administrators appointed in the Debtors’ United Kingdom insolvency proceedings (the “U.K. Administrators”), the trustees for the T&N Retirement Benefits Scheme (1989) (the “T&N Pension Trustees”), or any other U.S. or U.K. creditors made an appearance at the Estimation Hearing.

II. FINDINGS OF FACT

T&N is a wholly-owned subsidiary of Federal-Mogul Global, Inc. (“Federal Mogul”), which was acquired by Federal-Mogul in March 1988 in a stock purchase. (PD Exh. 34 at 30.) The Turner and Newall families formed T&N in England in 1920, and according to T&N’s National Trial and Coordinating Counsel for the United States, Paul Hanly, Esq. (“Hanly”), it first discovered the dangers of asbestos as early as 1921. (Tr. at 86-87.)³ Between 1976 and 2001, T&N resolved approximately 245,000 asbestos personal injury cases (PD Exh. 2 at 9) and has paid out nearly \$835 million (present value) to resolve these claims. (Tr. at 27 (Hanly).) On October 1, 2001 (the “Petition Date”), Federal-Mogul filed for relief under Chapter 11 of the Bankruptcy Code in response to the mounting liabilities from asbestos litigation.

This estimation has created a conflict between members of the Plan Proponents and the PD Committee. The contested issue relates to the underlying Third Amended Plan of Reorganization (the “Plan”), which the PD Committee argues unfairly allocates value among the creditor constituencies. The PD Committee was not involved in the formulation in what it calls the “Central Deal,” an agreement forged between the ACC and other creditors committees. (PD FOF at 14.) As it now stands, the Central Deal allocates 50.1% of the Reorganized Federal-Mogul equity (no cash) to the proposed asbestos personal trust and 49.9% of the equity to the Federal-Mogul note holders (the

³ Cites to the Estimation Hearing transcript will be Tr. at _____. Where necessary, the testifying witness will be put in parentheses.

“Banks”). (See PD Ex. 34 at 6.) The 50.1% of the equity of the Reorganized Federal-Mogul will establish a trust in accordance with section 524(g) in the Bankruptcy Code and the Trust Distribution Procedures (“TDPs”) in the Plan. Other unsecured claims, including the claims of the PD Committee, are to be decided under one of three distribution ratios of the plan, which is dependant on aggregate estimated value of asbestos personal injury claims against T&N. (PD FOF ¶ 19.) Essentially, the higher the estimate of the aggregate liability, the higher the denominator will be, thereby lowering the ratio and lowering the percentage of recovery for other, non-asbestos personal injury unsecured claims against T&N. (Id.) The asbestos personal injury claims, however, will receive the aggregate number in the numerator under any of the distribution ratios.

Therefore, the PD Committee asserts that a higher estimate of asbestos personal injury claims will suppress the amount of cash the Debtors will need to satisfy the claims of property damage claimants and other unsecured creditors of T&N, thus raising the value of the new equity securities that will be distributed to most creditor constituencies and freeing cash flow to pay interests on the new debt that will be issued to various banks. As such, the PD Committee proffers a lower estimate of aggregate liability, whereas the Personal Injury Claimants seek a larger amount. The Court’s function here is not Plan confirmation; rather, the Court is charged with determining an estimation of liability for the creation of a personal injury trust, which is one of many aspects that will be considered by the Bankruptcy Court when it considers the confirmation of the Plan.

A. T&N's liability in the United States

T&N was named in its first asbestos personal injury case in the United States in August 1977. (PD Exh. 34 at 31.) By the Petition Date, approximately 114,000 lawsuits were pending in the United States (Id.) Hanly testified that T&N's liability in the United States arose out of four product lines. A brief discussion of these sources of liability is important in understanding the significant reach of T&N's asbestos containing products in the United States and the United Kingdom.

1. Limpet

The Limpet product was invented by T&N in 1931 and was distributed throughout the United States from 1934 to 1974. (Tr. at 56 (Hanly).) Limpet was a spray-on application that was used for fireproofing, insulation, condensation control, and decorative finishes. (Id.) Limpet was made of pure asbestos, either amosite or crocidolite, and had the greatest asbestos content of any product in the United States. (Id.) According to the Disclosure Statement Describing the Third Amended Plan of Reorganization (hereinafter the "Disclosure Statement" and submitted as PD Exh. 34.), the Limpet was not widely marketed or used in the United States due to its significant expense, its relatively slow spraying process and the U.S. licensees' lack of success in promoting it. (PD Exh. 34 at 32.) From 1957 to 1965, approximately half of all Limpet sold in the United States went into three high-profile projects: Chase Manhattan Plaza in New York City, the Prudential Center in Boston, and the Central Terminal Building at

LaGuardia International Airport. (Id. at 32-33.) Since the late 1970s, T&N was named in relatively few cases by plaintiffs alleging Limpet exposure. (Id.)

2. Keasbey

In 1934, T&N purchased Keasbey & Mattison Co. (“Keasbey”), who until 1962, manufactured and sold every variety of asbestos-containing product, including Limpet, textiles, insulation, and building materials. (Tr. at 54-56 (Hanly).) Keasbey was often referred to as a “mini Johns-Manville.” (Id. at 54.) In 1962, T&N sold Keasbey’s assets.

In the late 1980s, asbestos plaintiffs discovered that T&N was the supplier of raw asbestos fiber to Keasbey, and began asserting claims against T&N on this supplier theory. Also, plaintiffs pursued claims on an alter ego theory, which proved largely unsuccessful in the courts (see PD Exh. 34 at 33) and few claims were settled based on the alter ego or similar theories of liability. Because of the breadth of the Keasbey product line, the resulting liability from Keasbey products could be substantial.

3. Raw Fiber

T&N owned asbestos mines and mining interests in southern Africa and Canada. (Tr. at 53 (Hanly).) T&N sold raw fiber to asbestos companies in the United States, and used its mined fiber to manufacture its own products. (Id.) T&N was sued in the United States by plaintiffs alleging personal injury from asbestos exposure in the manufacturing or transportation process. (Id.) T&N was also sued by end-users of asbestos containing products on a supplier theory. T&N’s Disclosure Statement states that it brokered a

“minuscule amount” of fiber to United States companies. (PD. Exh. 34 at 34.)

Nevertheless, T&N did form a joint-venture with Johns-Manville, which still exists today, and might be a potential source of liability for claimants injured by Johns-Manville products. (Tr. at 58 (Hanly).)

4. United Kingdom Finished Products

T&N had several United Kingdom subsidiaries that manufactured finished products containing asbestos and marketed them in the United States. Based on the agency relationship that existed between T&N and the United Kingdom subsidiaries, Hanly testified that the parent was responsible for all claims against any of the two United Kingdom subsidiaries. (Tr. 59-60 (Hanly).) Two of the subsidiaries were TBA Industrial Products Ltd. and Ferodo U.K. (Tr. 60-61.) Hanly testified that TBA Industrial was named in more than 75 percent of the claims against T&N in the United States; whereas, Ferodo was only named in 1 to 5 percent. (Tr. at 61.)

B. T&N’s Liability in the United Kingdom

T&N’s United Kingdom asbestos claims administrator, Andrea Crichton (“Crichton”) testified that T&N’s liability in the United Kingdom differs from that in the United States because the majority of asbestos personal injury claims in the United Kingdom are based upon negligence and/or failure to provide a reasonably safe workplace for T&N employees. (Tr. at 153 (Crichton).) Other claims are from family members who lived with T&N employees, environmental exposure claims from persons living in the vicinity of T&N factories, and some products liability claims. (Tr. at 153-

54.) The evidence submitted indicates that the United Kingdom's liability is substantially lower than that of the United States.

C. Medical Evidence on Asbestos Related Disease

Each party put forward its respective expert to discuss the medical evidence regarding the incidence and trends of asbestos related diseases in the United States. Plaintiffs presented expert testimony from a medical doctor, Laura Welch, M.D. ("Welch"), a physician with board certifications in both occupational environmental medicine and internal medicine. (Tr. at 183 (Welch).) Dr. Welch has held faculty and medical staff positions at the Albert Einstein School of Medicine, Yale University School of Medicine, George Washington University School of Medicine, and the Washington Hospital Center. (Tr. at 189.) Dr. Welch has had over twenty-five years of experience in the diagnosis and treatment of asbestos-related diseases, and in the design of programs for that purpose. (Tr. at 186-87.)

The PD Committee submitted the testimony of Dr. Hans Weill, M.D., who is a board-certified pulmonologist, former President of the American Thoracic Society, and researcher with 35 years of experience in the study and treatment of asbestos exposure. (See Testimony of Hans Weill, M.D., in Owens Corning v. Credit Suisse First Boston, No. 04-CV-905 (D. Del.) 1/18/2005 at 45-48 (hereinafter "Weill Tr. at ____").)⁴ Dr. Weill has been on the staff at Tulane Medical Center since 1976 and has personally evaluated over 1,000 individuals exposed to asbestos. (Id.)

⁴ Dr. Weill's Owens Corning testimony was admitted to the record pursuant to an agreement among the parties. (See Tr. at 803-04.)

Even though the ravages of asbestos diseases are well documented, the experts dispute the trends in the main categories of disease: mesothelioma, lung cancer, other cancers, and nonmalignant diseases, such as asbestosis, pleural plaques, and thickening. Both experts agree that the latency period for most asbestos related disease is 20 to 40 years. (Weill Tr. at 40; Tr. at 255 (Welch)). In essence, Dr. Weill asserts that because of the dose response function for asbestos-related disease, and the fact that workplace exposures have become increasingly less prevalent since 1972, the overall disease burden in the United States is declining. (Weill Tr. at 71.) Dr. Weill believes, in part, that the phenomenon of systematic over-reading of chest x-ray films by asbestos litigation screening facilities, as reported in the Gitlin Study (see PD. Exh. 28), undermines the evidence that the incidence of asbestos-related disease is increasing as against T&N. (PD Exh. 59 at 6.) Based on his 2004 study “Changing Trends in Mesothelioma Incidence” (See PD Exh. 62), Dr. Weill concluded that the peak incidence of mesothelioma in the United States occurred in 1994, and that the incidence has since decreased. (Weill Tr. at 59.) Because mesothelioma incidence is probably “the clearest measure of the extent of asbestos related disease, these [declining] trends strongly indicate that the overall burden of asbestos health effects in the USA is waning, a pattern that would be expected to continue.” (PD Exh. 62 at 441.) Dr. Weill criticizes the Nicholson Study⁵ as being

⁵ The “Nicholson Study” is the oft-cited report authored by William J. Nicholson, et al., entitled Occupational Exposure to Asbestos: Population at Risk and Projected Mortality-1980-2030, 3 American Journal of Industrial Medicine 259 (1982) (hereinafter the “Nicholson Study” and submitted as Pl. Exh. 5), which sought to predict the incidence of asbestos related cancers until the year 2030.

overstated because it does not accurately reflect recent reduced exposure conditions. (PD Exh. 21 at 8.) Also, Dr. Weill disputes the assertion that other forms of cancer, such as esophageal, colo-rectal or laryngeal cancer are causally related to asbestos exposure. (PD Exh. 21 at 8.)

Conversely, Dr. Welch aligns herself with the projections of the Nicholson Study and the Surveillance, Epidemiology, and End Results ("SEER")⁶ data, which indicate that there are currently about 2,800 new mesothelioma cases in men each year, plus several hundred cases in women. (See Tr. at 270 (Welch).) Dr. Welch states that the incidence of mesothelioma in the United States has not yet reached its peak, but believes the rate is slowing. (Tr. at 283.) Furthermore, the Health and Safety Executive of Great Britain ("HSE"), which is responsible for the regulation of health and safety risks in Great Britain, published a report in 2003 that states the annual number of mesothelioma deaths. (See Pl. Exh. 6.) This report indicates that the number of mesothelioma deaths in Great Britain has risen fairly constantly over time, from 153 in 1968 to 1,848 in 2001, and is expected to peak at 1,950 to 2,450 around 2011 to 2015. (Pl. Exh. at 6.)

Lung cancer has also been attributed to asbestos exposure, however, a diagnosis of asbestosis is not necessary for the development of asbestos-related lung disease. (Tr. at 249 (Welch)). Yet, workers with asbestosis have a four-fold increased risk of developing

⁶ SEER Incidence Age-Adjusted Rates, 9 Registries, 1973-2002," National Cancer Institute, Bethesda, Maryland, available at <http://www.seer.cancer.gov/faststats/sites.php?site=Mesothelioma&stat=Incidence> (last visited July 18, 2005).

lung cancer. (Tr. at 203 (Welch); Weill Tr. at 102.) Regarding nonmalignant diseases, such as pleural disease and asbestosis, it is possible that a diagnosis can be made without the patient demonstrating functional impairment. (Tr. at 197 (Welch); Weill Tr. at 61, 101). Moreover, the 2004 American Thoracic Society Statement (the “ATS Statement”), which provides guidelines for diagnosing nonmalignant asbestos-related disease, states that asbestos can cause injury without functional impairment. (Pl Exh. 25 at 691; Tr. at 199 (Welch). Diagnosis of asbestosis can also be complicated by the fact that asbestosis can exist when a person has a normal chest x-ray on an ILO scale.⁷ (Tr. at 201-202 (Welch); Weill Tr. at 75, 101.) The 2004 ATS Statement supports the assertion that asbestosis can persist despite no radiographic evidence (x-ray) of asbestosis. (Pl. Exh 25 at 696, 705.) Like, mesothelioma, other nonmalignant diseases have prolonged latency periods. Based upon CDC/NIOSH data, Welch stated that over the decade of 1990-2000 asbestosis incidence continued to rise and peaked at 20,000 hospitalizations in 2000. (Tr. at 259 (Welch); Pl. Exh. 33 at 3-4.)

D. T&N’s Litigation Experience in the United States

Plaintiffs presented Mr. Paul Hanly (“Hanly”), the primary outside defense counsel for T&N in the United States for the twenty years preceding its bankruptcy, to describe

⁷ The term “ILO Scale” means the system for the classification of chest x-rays set forth in the International Labour Office's Guidelines for the Use of ILO International Classification of Radiographs of Pneumoconioses (1980) as amended by the International Labour Office. The National Institute for Occupational Safety and Health’s (“NIOSH”) B Reader approval is granted to physicians who demonstrate proficiency in the classification of chest radiographs for the pneumoconioses using the ILO Classification System. See <http://www.cdc.gov/niosh/topics/chestradiography/breader-info.html> (last visited August 17, 2005).

T&N's litigation strategies in response to its mounting asbestos liability. The PD Committee did not offer rebuttal testimony. Hanly's evidence was crucial because it shed light on the task of placing the appropriate weight on T&N's historical settlements, and provided insight into the perils that T&N faced in the months before filing bankruptcy. The Court finds Hanly's testimony regarding the various strategies used by T&N is credible and corroborated by the testimony of Mr. William Hanlon, the primary outside counsel for the Center for Claims Resolution (the "CCR"), Mr. Michael Lynch, CFO for T&N, and Dr. Mark Peterson ("Dr. Peterson"), the Plaintiffs estimation expert.

1. Pre-1985

T&N's early strategy was to settle legitimate claims for the lowest amount possible so that it could avoid the uncertainties and risks associated with litigation. (Tr. at 65 (Hanly).) Hanly explained that this response was borne out of necessity because in cases involving mesothelioma and lung cancer the jury verdicts were usually high since it was easy for plaintiffs to impute corporate knowledge to T&N based upon corporate documents dating back to the 1930s. (Tr. at 85-87.) Therefore, establishing liability against T&N for failure to warn was not difficult.

2. The Asbestos Claim Facility

In June 1985, T&N joined the Asbestos Claim Facility ("ACF"), a consortium of thirty-two asbestos producers and sixteen insurers, who sought to reduce the aggregate settlement costs in asbestos litigation by streamlining administration costs and pooling

together legal experience. (Tr. at 49.) Among the original members were notable asbestos-defendants Eagle-Picher, Pittsburgh Corning, Celotex Corp., Fibreboard Corp., and Owens-Corning Fiberglass Corp., U.S. Gypsum and National Gypsum, and insurers such as Aetna Life and Casualty, Fireman's Fund, Cigna, the Hartford Insurance Group, and Lloyds of London.⁸ After only a few years, internal disputes arose and the ACF was dissolved in October 1988. (Id.)

3. The Center for Claims Resolution

The former members of the ACF, including T&N, joined the Center for Claims Resolution ("CCR") in 1988. (Tr. at 49-50 (Hanly).) Like the ACF, the CCR had the same goals of minimizing litigation expenses and increasing its members bargaining power with personal injury claimants. (Id.) At first, the CCR was an "all pay" regime whereby each member paid a portion of a claim that was either settled or went to verdict, regardless of which party(s) were named on the complaint. (Tr. at 68.) In 1991, this changed to a named-party only regime, which required only the parties named on the caption to be liable. The CCR developed intricate share allocations that apportioned liability percentages to each claim based on the alleged occupational category or job site. (Tr. at 73.) The share allocations were based upon past settlement averages of each member and production and sales history of each member as it relates to the type,

⁸ Fitzpatrick, Lawrence, "The Center for Claims Resolution," 53 Law and Contemporary Problems 13-14 (1990). Notably, Johns-Manville was not included in the final ACF agreement because it was still under the jurisdiction of the bankruptcy courts. Id.

location, and application of the asbestos-containing product. (Tr. at 75.) Hanly considered the share allocation approach a fair way to apportion liability and the share allocation was adjusted regularly at the insistence of a member and after approval by the CCR board. (Tr. at 74-76.)

Before paying a claim, the CCR generally required (1) evidence of asbestos-related disease and (2) proof of exposure by an asbestos containing product of at least one CCR member in plaintiff's complaint. (Tr. at 68.; see Pl. Exh 20 (1998 Settlement Agreement); Pl. Exh. 52 (2000 Settlement Agreement).) A plaintiff did not have to produce additional proof of exposure to every CCR member's product before settlement was reached. (6/1/05 Hanlon Dep. at 28-29.) Rather, the CCR would attempt to settle a claim for an amount that represented the total liability of all CCR members in the case. (Id.) If there was a settlement, each named-CCR member would contribute its respective share allocation. (Id. at 29-30.) Hanly testified that the CCR benefitted T&N because it paid far less in aggregate since the cost savings and reduced settlement amounts, more than offset the costs of paying claims that T&N would not have paid had it not been a member of the CCR. (Tr. at 77-78.) Nevertheless, T&N had a substantial share allocation attributed to it; from 1991 onward, T&N garnered a seat on the CCR board because it had one of the three largest liability shares in the CCR. (Tr. at 103.) According to Hanly and Dr. Peterson, T&N's share allocation hovered around 20% for certain occupational categories. (Tr. at 107 (Hanly); Tr. at 734 (Peterson).)

In 1994, T&N and the other CCR members attempted to resolve their present and future personal injury liabilities through a class action settlement (the “Georgine class action”). See Georgine v. Amchem Prods., Inc., 157 F.R.D. 246 (E.D. Pa. 1994). Hanly testified that concept was to create a class action mechanism by which all future asbestos personal injury claims filed against any CCR member would be resolved pursuant to criteria set forth in the class action settlement agreement. The district court approved the class action settlement and entered an injunction that prohibited new claims from being filed against T&N. (Tr. at 67.) The matter was appealed to the Third Circuit and the Court of Appeals reversed the class certification. Georgine v. Amchem Prods., Inc., 83 F.3d 610 (3d. Cir. 1996). The Supreme Court affirmed the Third Circuit’s decision and vacated the injunction in June 1997. Georgine v. Amchem Prods., Inc., 521 U.S. 591, 629 (1997). Hanly testified that T&N, and all of the CCR members, faced a flood of claims as a result of the four-year injunction being lifted. (Tr. at 67-68.) As a result, the CCR implemented the Strategic Settlement Program (the “SSP”), which sought to settle cases in large groups for the lowest amount CCR could negotiate. Notwithstanding this tactic, both Dr. Peterson and the PD Committee’s estimation expert, Dr. Robin Cantor (“Dr. Cantor”), testified that T&N’s settlement averages for mesothelioma from 1997 to 2000 rose from \$43,000 to over \$80,000. (See Pl. Exh. 4 at slide 9; PD Exh. 2 at 18.)

In the early 1990s, certain “corporate conduct” documents came to light during T&N’s litigation with Chase Manhattan Bank that concerned the costs of asbestos removal from Chase’s New York City skyscraper. (Tr. at 112-115 (Hanly).) Before trial,

Chase's lawyers microfilmed a million T&N files at its Manchester England record repository. In essence, these documents traced T&N's corporate legacy as the asbestos industry leader in the United Kingdom, its early involvement in industrial hygiene, and its corporate knowledge and activities once it became known that asbestos exposure was lethal. Hanly testified that during the 1990s these documents were widely dispersed both among the legal profession, and also to the public. (Tr. at 111-115 (Hanly).) In, 2002, the content of the T&N documents was captured by a British journalist, Geoffrey Tweeddale in his book entitled Magic Mineral to Killer Dust: Turner & Newall and the Asbestos Hazard. The parties dispute the effect that these events will have on T&N's future indemnity costs; however, it is not illogical to conclude, as Dr. Peterson does, that the document disclosure and the Tweeddale book both impacted T&N's public notoriety as a significant contributor to the United States' and United Kingdom's asbestos crises.

In January 2001, T&N left the CCR for several reasons: its share allocation had increased; the number of members had decreased (from 20 to 10), and other members were filing for bankruptcy. (Tr. at 78-79 (Hanly).) The PD Committee argues that these reasons contradict Federal Mogul's public statements in 2001, whereby it stated that T&N was leaving the CCR because it believed it needed a change in litigation strategy. (PD Exh. 94 at slide 31.) The PD Committee asserts that T&N's settlement experience in the CCR should be given full weight in consideration of what T&N's indemnity costs should be as of the Petition Date. Indeed, there is no testimony in the record that CCR members received "volume discounts" by virtue of their membership, or that plaintiffs received a

lower aggregate amount from a collective settlement than they would have received through individual settlements. (See Tr. at 1021-22 (Cantor).)

4. Post-CCR

In the nine months prior to filing bankruptcy, January 1 to October 1, 2001, T&N found itself facing thousands of claims. Hanly testified that T&N's departure from the CCR coincided with the bankruptcy filings of a number of major asbestos defendants, which he believed increased the costs and exposure of being a stand-alone defendant. (Tr. at 77-78.) During this time, Hanly testified that T&N had two requirements for settlement: (1) did the claim have enough evidence to survive a motion for summary judgment indicating exposure to a T&N or Keasbey asbestos containing product; and (2) did the claimant demonstrate evidence of an asbestos-related disease. (Tr. at 79.) T&N was able to have some success in defending itself; particularly, Hanly testified that mass consolidations of cases resulted in lower per case settlement averages. (Id.)

Among the factors considered by T&N when it reached a settlement value was: severity of claimant's disease, strength of exposure evidence, strength of medical evidence, identity of plaintiff's doctor supplying the diagnosis, identity of plaintiff's counsel, jurisdiction where case was pending, plaintiff's ability to get a trial date; plaintiff's economic damages, and the history of asbestos defendants in the jurisdiction. (Tr. at 79-80, 92.) Hanly testified that T&N was aware of the credibility of many of the plaintiff medical doctors in the nonmalignant cases and priced these cases accordingly. (Tr. at 80.) Similar to its CCR membership, T&N paid out a several share of its liability

and did not factor in what a claimant might or might not get from another defendant. (Tr. at 76-77.) Hanly testified that the above mentioned factors were the criteria to price cases; thus, the threat of punitive damages were not factored into the equation. (Tr. at 92, 102.) T&N has only faced one punitive damages verdict in its history (March 2001), which was bonded and paid in 2004 and not included in the T&N database. (Tr. at 92.) Importantly, neither estimation expert considered punitive damages in arriving at their settlement averages.

After the CCR, T&N resolved some nonmalignant claims (most in a settlement of 10,700 premises liability claims pending in Mississippi for \$300 each), but largely focused its litigation efforts on the mesothelioma claims. (Tr. at 83.) Hanly testified that the Mississippi settlement was not indicative of the exposure that T&N now faced as a stand-alone defendant. Ultimately, Hanly believed that the looming personal injury liability is what caused T&N and the Federal Mogul companies to seek Chapter 11 protection. (Id.)

E. T&N's Litigation Experience in the United Kingdom

Ms. Crichton testified as to the tactics used to defend lawsuits filed in the United Kingdom. The great majority of United Kingdom claims were brought by T&N employees on the legal theory that T&N did not provide a reasonably safe work environment. Crichton called these cases indefensible because it was not difficult for a claimant to prove that T&N breached its duty towards its employees. (Tr. at 160 (Crichton).) Similar to the early litigation strategy in the United States, T&N attempted to

settle legitimate claims as soon as possible. (Tr. at 152, 156.) Also similar was the requirement that a claimant demonstrate a disease caused by asbestos exposure and that they were exposed through the fault of T&N. (Tr. at 159.) To prove the first requirement, T&N required that claimants provide a report from a doctor who specialized in asbestos diseases. (Tr. at 164.) To satisfy the second requirement, T&N would look to its employment records for employee claims, or rely on the claimants statement, witnesses, and T&N documents for non-employee and product liability claims. (Tr. 162-163.)

F. Estimations of Liability

Both parties offered an expert who estimated T&N's aggregate asbestos personal injury claims in the United States, both for (i) claims pending, but unpaid as of the Petition Date; and, (ii) the present value of future claims that can be expected to be filed after the Petition Date. Plaintiffs retained Dr. Mark Peterson, a lawyer with a doctorate in experimental social psychology, who is associated with the RAND Institute, and for over the last 20 years has been involved in studying the civil litigation system and the mass tort process in the United States. Dr. Peterson has been recognized as an expert in numerous asbestos estimation proceedings including: Eagle-Picher, National Gypsum, Babcock & Wilcox, Armstrong, Western Asbestos, H.K. Porter, E.J. Bartells Co., and Raytech. (See Pl. FOF ¶ 71.)

The PD Committee proffered Dr. Robin Cantor, an economist who specializes in econometrics, statistical modeling and risk analysis. (Tr. at 834.) Dr. Cantor has

conducted numerous forecasts and statistical analysis for asbestos, environmental, and antitrust clients, as well as consulted in other asbestos estimation matters. (Tr. at 840.)

Dr. Cantor currently serves as a Director of the Financial Insurance & Claims Services Practice of Navigant Consulting, Inc. (“NCI”), and leads NCI’s Liability Estimation & Insurance Coverage Analysis practice. This group has responsibility for conducting asbestos liability estimates on behalf of a variety of clients, including, at present, six bankruptcy proceedings and five other asbestos-related matters. (PD Exh. 3; Tr. at 843.) Until this trial, Dr. Cantor had never been qualified as an expert on asbestos liability forecasting. (See Tr. at 856.)

Dr. Peterson calculated two aggregate estimates for T&N’s pending and future claims. The first is based on no increase in future claims, the second is based on an increase in future claims. Dr. Peterson’s “No Increasing” projection for all pending and future claims put T&N’s United States liability at approximately \$8.2 billion at net present value. His “Increasing” projection, his preferred projection, placed T&N’s United States liability at \$11.1 billion. (Tr. at 523.) In addition, he estimated T&N’s liability for present and future claims in the United Kingdom to be £229 million or (approximately \$400 million USD). (Tr. at 561.) Dr. Cantor, in contrast, placed the net present value of all pending and future United States claims at \$2.5 billion. (Tr. at 878-79.) Neither the PD Committee nor Dr. Cantor estimated the aggregate liability in the United Kingdom because the claims “are only a small fraction of the United States claims, and will not significantly affect recoveries for property damage claimants.” (See PD Exh. 2 at 4-5.)

1. Pending United States Claims

It is undisputed that there are 396,649 total records in the T&N Database. (PD Exh. 2.) Dr. Peterson and Dr. Cantor agree on the premise that total liability is derived by the formula:

$$[\text{Number of Claims}] \times [\text{Average Settlement Value}] \times [\text{Percent Paid}] = \text{TOTAL LIABILITY}$$

Dr. Peterson looked to the T&N Database⁹ and determined the pending claims for each type of disease: mesothelioma (“Meso”), lung cancer (“Lung”), other cancer (“Othc”), and nonmalignant disease (“Nonm”). (Tr. at 409-410.) Also, there was a number of unspecified claims (“Unsp”). The unspecified claim is most frequent among recently filed claims, and Dr. Peterson reallocated the number of pending claims based on the percentage of those open claims actually manifested into the disease that was originally alleged. (See Pl. Exh. 4 at slide 6.) Thus, what was originally 30,739 pending “Unsp” got reallocated, by disease based upon data in the T&N Database. (Id. at 7.) The total number of pending claims after reallocation is as follows:

Description	Meso	Lung	Othc	Nonm	Unsp	TOTAL
Realloc. Number Pending	3,002	4,891	2,080	119,776	4,487	134,235

(Id.)

⁹ The T&N Database collectively refers to the database maintained by CCR and the database that was maintained by T&N after it left the CCR until the Petition Date.

Dr. Cantor determined that there were 108,240 “Open Claims.” (PD Exh. 2 at 9.) She segmented out 29,862 claims, the Settled But Not Yet Documented and Settled But Not Yet Paid claims, and included these in her closed claims amount. (Id.) If, however, these unpaid claims were included in her “Open Claims” number, the total would be 138,102. (See PD 2 at 9.) Dr. Cantor used the 108,240 number, and based upon the T&N Database, assigned each claim a disease category:

Meso	Lung	Othc	Asbestosis	Pleural	Unknown	Other	TOTAL
1,703	2,188	741	55,166	3,054	44,455	933	108,240

(Id. at 10.) Dr. Cantor imputed data by “matching data” to the Johns-Manville Trust, or by using a transition matrix similar to that used by Dr. Peterson. (Id. at 10-11.) In sum, both experts place the number of unpaid, unresolved pending claims at approximately 135,000; however, Dr. Cantor uses the 108,240 number in her pending claims estimation.

2. Settlement Averages and Dismissal Rates

The second variable in the estimation formula is the settlement averages per disease. Each expert sought to estimate what the average cost to T&N would have been, by claim and disease category, had it not filed for bankruptcy. Dr. Peterson followed a four-step approach in estimating T&N’s settlement values. (See Pl. Exh. 4 at slide 13.) First, he used the information in the T&N Database to calculate the historical settlement values for mesothelioma during the two years prior to the Petition Date (what he terms a “calibration period”). (Tr. at 427.) Because the database included both CCR and post-CCR settlement values, Dr. Peterson testified that weighted consideration had to be given

to those settlements where T&N was a stand-alone defendant. (Tr. at 416-417.) Dr.

Peterson, demonstrated this disparity in mesothelioma settlements below:

Period	Average Meso Payment (in 2001 dollars)	Cumulative Percent Change
1997 (CCR)	\$43,635	NA
1998 (CCR)	\$46,608	107%
1999 (CCR)	\$60,936	140%
2000 (CCR)	\$86,606	198%
2001 (post-CCR)	\$138,939	318%

(See Pl. Exh 4 at slide 12.) To forecast a trend, he then calculated the estimated rate of continuing increase in the T&N settlement values by calculating the average of the 1997-1998 Meso settlements (\$45,974--weighted for the number of settlements in each year) and the average of the 2000-2001 Meso settlements (\$98,267--weighted), which resulted in a 214% increase. (Pl. Exh. 2 at 14.) He applied this rate to the \$98,267 (the average for 2000-2001) and determined that the mesothelioma average was \$210,291. (See Pl. Exh 4 at slide 15; Tr. at 427.) He then determined the relative average settlement values for all other diseases using T&N's historic settlement ratios between mesothelioma and the other disease (Tr. at 434-435), and compared these averages with the Owens-Corning and Babcox & Wilcox settlement averages. (See Pl. Ex. 4 at slide 17.) After applying these ratios, the settlement averages were: Lung \$35,013; Othc \$15,509, and Nonm \$7,991, which he demonstrated were below the settlements observed in Owens-Corning

and Babcox & Wilcox. (Id.) Dr. Peterson then compared these values to the Trust Distribution Procedure's Scheduled Values and determined that for simplicity these values should be used because they are relatively close, in fact lower, to the settlement averages: Meso \$200,000; Lung \$32,000; Othc \$14,750; and Nonm \$7,000. (See Pl. Ex. 4 at slide 18.) Finally, he calculated the average claim resolution amount, which is the product of the percent of claims paid by the average settlement amount (in 2001 dollars). (See Pl. Ex. 4 at slide 24.)

Total pending liability was therefore determined by multiplying the number of pending claims for each disease category by the average resolution amount for each category, which Dr. Peterson concluded was \$1.4 billion, as depicted below:

Disease	Reallocated Claims	Avg. Resolution	Indemnity (\$mill)
Meso	3,002	\$163,711	\$491.5
Lung	4,891	\$27,630	\$135.2
Othc	2,080	\$13,170	\$27.4
Nonm	119,776	\$6,242	\$747.6
Unsp	4,487	\$0	\$0
Total	134,236	NA	\$1,402

(Pl. Exh. 4 at slide 25.)

Dr. Cantor, on behalf of the PD Committee, used a weighted average of settlement values from the four years preceding T&N's bankruptcy (what she terms the "four year rolling average") as the benchmark for establishing the settlement averages by disease category. (Tr. at 883.) She observed no increasing trend in claim values for any diseases

over that four year period except for mesothelioma, which had an 18.3% annual increase. (Tr. at 884.) Hence, Dr. Cantor did not compute relative settlement averages on the other asbestos-related diseases, but rather, calculated the actual estimated average settlement value by disease for the four year period 1998-2001. Below are the settlement averages based upon her four-year rolling average:

	Meso	Lung	OthC	Asbestosis	Pleural	Unknown
1998-2001	\$68,866	\$13,011	\$5,664	\$2,600	\$915	\$4,585

(See PD Exh. 2 at 18.) She used her base estimate, and then stepped up the mesothelioma averages for each of the first five years after the Petition Date; that is, ranging from \$81,502 in 2002 and \$159,886 in 2007. (Tr. at 895-6.) After year five, Dr. Cantor uses the \$159,886 value for mesothelioma for every year of her forecast. (PD Exh. 2 at 31.)

Dr. Cantor then computed the dismissal rate during the 1998-2001 base period. Although there were slight changes by disease, she concluded that the acceptance rate was generally 90 percent. (PD Exh. 2 at 33-34.) Dr. Cantor then took 10 percent off the 108,240 "Open Claims," resulting in 96,650 compensable claims, and multiplied this number by the settlement averages, for a total of \$420.5 million net present value. (PD Exh. 2 at 38.) The settled but not yet decided and the settled but not yet paid claims totaled \$139.9 million. Therefore, Dr. Cantor's aggregate estimate for unpaid pending claims is \$560.4 million.

3. Future United States Claims

In forecasting the number of future claims, each expert had to use epidemiological models to predict disease incidence in the population, and then make adjustments based

on the T&N data. Dr. Peterson based his projections on the Nicholson study, and considered the observed trends in malignant claiming rates, the overall changes in the asbestos litigation landscape, the increased publicity of T&N, and the bankruptcies of other prominent asbestos defendants. (Tr. at 487.)

Dr. Peterson then calculated T&N's historic propensity to sue— the percentage of people who actually filed (or will file) a claim against T&N – by dividing the number of people who actually filed a claim against T&N for mesothelioma by the number of overall mesothelioma deaths as predicted by the Nicholson model for that same year. (Tr. at 499-500; Pl. Exh. 2 at 27.) The propensity to sue calculation was derived from his two-year calibration period (or base period). (Tr. at 504.) Dr. Peterson made two alternate assumptions: (1) a No-Increasing projection, which assumed the propensity to sue would remain unchanged in future years; and, (2) an Increasing propensity projection, which assumed that the propensity to sue T&N would increase during 2002 through 2006, in accordance with the trend in claims filings observed in the years immediately prior to the Petition Date, and then level off thereafter. (Tr. at 504.) The Increasing model is Dr. Peterson's preferred projection. (Tr. at 505.) Finally, Dr. Peterson used the formula:

$$[\text{Propensity to Sue}] \times [\text{Incidence in Future Year}] = \text{Projected Future Claims}$$

There is no comparable peer-reviewed study, like the Nicholson study, which predicts the incidence of nonmalignant asbestos-related disease. (Tr. at 491-92.) Dr. Peterson explained that these diseases are progressive diseases, and therefore, claims projections cannot be derived from epidemiological evidence. (Pl. Exh. 2 at 35.)

Nevertheless, Dr. Peterson states that relationship between cancer and nonmalignant claims filings is “one of the most common patterns in asbestos litigation.” (Id. at 36.) Thus, Dr. Peterson calculated the ratio between the number of cancer claims and the number of nonmalignant claims filed against T&N in 2000. (Tr. at 492.) He did not use the 2001 data because it was 50 percent greater than the 2000 ratio. (Pl. Exh. 2 at 36.) He derived a nonmalignant multiplier of 10.19, which he used to predict the number of nonmalignant claims for each future year. (Tr. at 514.) To calculate the total value of future United States claims, Dr. Peterson used the same settlement averages per disease that were used in the pending claims calculation. (Tr. at 520.)

As to nonmalignant claims, Dr. Peterson also asserts two assumptions. In his Increasing assumption, which coincides with his Increasing model for propensities to sue, he assumed that the ratio of nonmalignance to cancer claims would be 11 percent greater than the base period. (Pl. Exh. 2 at 36.) This increase was based upon the general experience of asbestos defendants in the 1990s, specifically using the filing experience of the Manville and UNR trusts. (Id.) His no increase assumption assumes that the ratio of nonmalignant cancers will be similar to that of his 2000 base period. (Id.)

Combining his increasing propensity to sue, and corresponding increase in nonmalignant claim filings, Dr. Peterson predicted that T&N would face 1,088,440 future asbestos personal injury claims. (Id. at 38, Table 20.) Under his No Increasing model, Dr. Peterson predicted the number of future claims at 706,779. (Id.) Dr. Peterson assumed that future settlements would occur two years after the claims were filed, a 2.5

percent inflation rate (a historical inflation rate over the last decade), and a 5.02 percent “risk-free” rate of return to discount the future costs to net present values. (Tr. at 520.) The inflation and interest rates were obtained by L. Tersigni Consulting, the financial experts for the ACC. (See Pl. Exh. 2 at 39.) Thus, he estimated that the aggregate future liability for the United States claims would be \$9.7 billion (Increasing) and \$6.8 billion (No-Increasing).

Dr. Cantor did not use the Nicholson study, but used a model developed by her consulting firm (the “NCI model”) to determine the incidence of mesothelioma deaths in the eight industries in which the use of Limpet was primarily involved. (PD. Exh. 2 at 20; Tr. at 965-66.) She then applied a dose-response formula developed by the Occupational Safety and Health Administration (“OSHA”), to the exposed population to estimate the future annual incidence of mesothelioma deaths. (PD Exh. 2 at 24; Tr. at 968.) Incidence of other malignant diseases were determined by using a report created by KPMG Peat Marwick (hereinafter the “KPMG model”). (See PD Exh. 2 at 25.)

For nonmalignant claims, Dr. Cantor derived a ratio from the compensable nonmalignant claims to compensable malignant claims from her four-year base period (1998-2001), which was 12.9 to 1. (Id. at 26.) She did not escalate this rate for the future claims because she testified there was no evidence in the T&N Database, or in the experience of other asbestos trusts to support an increase in nonmalignant claims filings. (Id. at 26-27.) Dr. Cantor did conduct two sensitivity analyses. First, she factored in the other three Nicholson industry areas: auto mechanics, primary asbestos manufacturing

and secondary asbestos manufacturing, which resulted in a modest increase in her estimate from \$2.485 to \$2.586 billion. (PD Exh. 2 at 46.) Second, she used the KPMG incidence tables for mesothelioma, instead of the NCI model, and came to a nominally higher estimate of \$2.592 billion. (PD Exh. 2 at 47.)

Like Dr. Peterson's "propensity to sue" analysis, Dr. Cantor conducted "compensability" analysis, which is calculated as the sum of compensated closed claims and the estimate of compensable pending claims during her four-year base period divided by the incidence of disease mortality over the same period. (PD. Exh 2 at 34.) Dr. Cantor first observed that 72% of compensated closed and pending cases in the T&N database had death year information. (Tr. at 974.) She then imputed death year information for 28% of claimants based on "a set of ordered rules and assumptions about the relationship of the filing date to the death date." (Id.) She calculated the compensability rates for mesothelioma (36.9%), lung cancer (19.5%) and other cancers (28.4%). (Pl. Exh. 2 at 37.) Under this "death year" approach, the compensability rate from the four-year base period was applied to future incidence of specific diseases, resulting in a forecast of 372,907 claims from the Petition Date till the year 2054. (Id. at 36-39.)

Dr. Cantor employed several sensitivities that resulted in a range of \$1.9 billion to \$3.4 billion for her aggregate estimate. She was of the opinion that changes in state laws, in particular Mississippi, Texas and Ohio, support her relatively lower settlement averages. (See PD Exh. 3.) Further, she compared the experiences with H.K. Porter and the Manville Trust, which indicated that the number of asbestos filings is trending downward, and believes that data supports her relatively lower estimate.

Dr. Cantor also assumed an inflation figure for future claims at 2.2%, which is based upon the United States Congressional Budget Office's estimated long term inflation rate in the Consumer Price Index. (PD Exh. 2 at 37.) She used a 5.5% "risk-free" discount factor to compute T&N's present value of liabilities that is based on the 30-year treasury bond estimates published annually by the United States Office of Management and Budget. (*Id.* at 37-38.) Dr. Cantor, however, notes that economic theory would support an even larger discount rate to "reflect the risk of the future cash flows anticipated by claimants at the time they were injured." (*Id.* at 38.)

4. Aggregate Liability in the United Kingdom

Dr. Peterson was the only expert that forecasted the pending and future liability in the United Kingdom. Dr. Peterson testified that he employed the same methodology that was used in forecasting T&N's liability in the United States (Tr. at 558.) Because T&N was the dominant asbestos defendant in the United Kingdom, Dr. Peterson testified that he distinguished between claims where T&N had sole liability, and those where T&N had shared liability. (Tr. at 550-551, 553.) He considered the fact that T&N had far fewer claims than the United States, stable settlement values, and timing differences in epidemiology and asbestos exposure. (Tr. at 553-56.) Also, Dr. Peterson testified that the United Kingdom data did not support an increase in the propensity to sue. (Tr. at 557.)

Thus, Dr. Peterson considered that average settlement values for mesothelioma, other cancer, asbestosis, and pleural disease, both for cases where there was shared liability and sole liability, and computed average resolution values based upon historical

payment percentages during the 1998-2001 base period. (See Pl. Exh. 4 at 49.) He predicted that there would be 21,125 future claims against T&N in the United Kingdom (see Pl. Exh. 4 at slide 52), and forecasted the total liability for present and future claims in the United Kingdom at £229 million (approximately \$400 million USD) (Tr. at 561.). The breakout by disease is depicted below in millions of £s.

Claims	Meso	Othc	Asbestosis	Pleural D.	Total
Pending	£8	£1	£3	£2	£14
Future	£121	£8	£52	£34	£215
All Claims	£129	£9	£55	£36	£229

(See Pl. Exh. 4 at slide 54.)

G. Plaintiffs' Criticisms of Dr. Cantor's Methodology

Plaintiffs take issue with several aspects of Dr. Cantor's methodology concerning future claims, which they argue make her estimates downwardly biased. It is argued that she mistakenly uses "death years" to count compensable claims filed during her four-year calibration period (1998-2001). Instead of counting the claims filed in a given year, and using that as a basis to project future compensable claims, Plaintiffs argue that Dr. Cantor erroneously imputed a death year to the claimants in her calibration period. She did this, in part, by using the claim payment date as a proxy for the date of death. Because the claim payment date is on average two years or more longer than the date of death, it is argued that Dr. Cantor's calibration period is flawed because it did not factor: (1) persons who made claims against T&N, but have not yet died, and (2) persons who have died

before the Petition Date, yet filed claims afterward. (Tr. at 1184-1190 (Peterson Rebuttal).) Thus, Plaintiffs argue that Dr. Cantor's death year methodology ignored over 30 percent of the cancer claims made during the calibration period. (Pl. FOF ¶95.) Also, Plaintiffs state that she excluded certain industries from her projection, even though T&N either directly, or through its subsidiary Keasbey, exposed persons in these industries to asbestos. (Tr. at 1101-1104.)

Plaintiffs state that the recent mesothelioma filings against T&N in 2001 and T&N's resolution history do not support Dr. Cantor's projections. Dr. Cantor testified that in 2001, 1,252 new mesothelioma claims were filed against T&N, which was up from the 900 new claims averages from 1998 and 1999. (Tr. at 1109-1110.) Plaintiffs contend that when you consider the 90% resolution rate, Dr. Cantor's 2002 projection of 660 compensable mesothelioma claims (a 40% drop from 2001) cannot be supported by either T&N's claims history, any epidemiological model, or events after the Petition Date. (Pl. FOF ¶ 96.) In addition, her future projections are contrary to the total number of filings against T&N before the Petition Date. Dr. Peterson testified that from a level of 18,000 new claims in 1995, the filings rose steadily to a annualized amount of approximately 60,000 new filings in 2001. (See Pl. Exh. 2 at 28.) Yet, Dr. Cantor projects only 23,706 compensable claims in 2002, a one-third drop from 2001 and a figure that is fewer than any year since 1997. (See PD Exh. 2 at 39.) Therefore, Plaintiffs argue that Dr. Cantor underestimates future filings.

Dr. Cantor's classifications of the disease for future claims is also questioned. Plaintiffs argue that Dr. Cantor failed to use transition data—that is, allocating a disease to an unspecified disease in the T&N database based on historical ratios—to estimate her future claims. Dr. Cantor testified that the use of untransitioned data shows that there is no increase, or even a decrease, in malignant claims over T&N's claims history. (Tr. at 1093 (Cantor).) Instead, Plaintiffs posit that Dr. Peterson's method, use of transitioned data is more reflective of T&N's litigation experience, which according to Hanly shows a marked increase in malignant claims. (Tr. at 79-82.)

Plaintiffs also dispute the settlement averages that Dr. Cantor used for each disease. For example, she calculated a settlement average of \$102,000 for mesothelioma in 2001, yet uses a \$68,886 base line to compensate all pending mesothelioma claims. (Tr. at 1117-1118.) Plaintiffs rely on Hanly's testimony that T&N experienced a 75% increase in settlement values for mesothelioma claims between 2000 and 2001, and that T&N was settling claims in 2001 for over \$130,000 (see Tr. at 81-82 (Hanly)) to demonstrate that Dr. Cantor's assertion, that T&N would be able to resolve claims cheaper out of the CCR than in the CCR, is inaccurate.

Further, Plaintiffs contend that of the other asbestos defendants Dr. Cantor considered in her side-by-side comparisons, she failed to fully appreciate the Union Carbide experience, which more closely resembled T&N's experience as it left the CCR at the same time as T&N. (See Tr. at 1170 (Cantor).) Yet, Dr. Cantor admitted that the number of claims filed against Union Carbide, and the costs to resolve those claims,

“skyrocketed” from 2001 to 2003. (Tr. at 1172.) On cross-examination, Dr. Cantor admitted that according to Union Carbide’s Form 10-Ks, there were 73,806 claims filed in 2001 (when it left the CCR), 121,916 claims in 2002, and then 122,586 in 2003. (See Tr. at 1169.) Likewise, Dr. Cantor acknowledged that Union Carbide’s indemnity costs went from \$39 million in 2001, to \$155 million in 2002, to \$293 million in 2003, then to \$300 million in 2004. (Tr. at 1168-70.) Hence, Plaintiffs insist that Dr. Cantor’s argument that filings and costs were trending downward, when compared with a similarly situated post-CCR member, is inconsistent with the factual record.

H. Defendant’s Criticisms of Dr. Peterson’s Estimate

The PD Committee questions Dr. Peterson’s estimate on the grounds that his estimate of \$11.1 billion is not on par with other estimates of T&N’s total aggregate liability. Defendant observes that advisors to the United Kingdom pension trustee (“Tillinghast”) have estimated T&N’s aggregate liability at between \$2.1-\$5.1 billion. (See PD FOF ¶ 90.) The estimation consultants to the UK administrators (“EMB”) calculated aggregate liability at \$5.3 billion, and also characterized Dr. Peterson’s claim values and propensity to sue numbers as “overstated.” (See Pl. Exh. 16 at 4-5.) Also, the PD Committee points to Dr. Peterson’s own shifting estimate of liability: first at \$6.7 billion (see PD Exh. 14), then \$5.6 billion (PD Exh. 14), and finally at \$11.1 billion. Dr. Cantor also points out that an estimate provided by the National Economic Research Associates (“NERA”) in 2001 and reported in Federal-Mogul’s Form 10-K filed on December 31, 2000 (the last 10-K before the bankruptcy filing) estimated that the aggregate liability for all the Federal-Mogul entities at \$1.8 billion. (PD. Exh. 2 at 6-7.)

Defendant attacks two central premises of Dr. Peterson's increasing estimate: (1) that there will be an increasing propensity to sue for cancers during the first five years of the forecast period, and (2) the ratio of claims for nonmalignant diseases to cancers will similarly increase. Thus, under the increasing model, Dr. Peterson estimates that there will be 1.1 million future claims, which Defendant states is nearly triple the 380,000 that have been filed against T&N in the 21 years before its bankruptcy. (See PD FOF ¶ 90.) The PD Committee reduces the nearly \$9 billion dollar gulf between Dr. Cantor's and Dr. Peterson's estimate to two factors (1) higher settlement averages per disease and (2) the increasing claiming rates on which Dr. Peterson's increasing estimate is based.

Defendant submits that Dr. Cantor's calculation of settlement averages based on historic settlements over her four-year calibration period is superior to the overstated Trust Distribution Procedures ("TDPs") that Dr. Peterson relies on. Dr. Peterson's settlement average per disease is significantly higher than they were in 2001. The settlement averages represent a 36% increase in mesothelioma claims, a 59% increase for lung cancer, a 204% increase for other cancers, and a 410% increase for nonmalignant diseases. (Tr. at 598-99, 608-610.)

The PD Committee also questions Dr. Peterson's claiming rates that are established in his Increasing model. While Dr. Cantor acknowledges that claims against T&N rose sharply from 1997 (22,000 claims) to the first nine months of 2001 (44,700 claims), she disagrees with Dr. Peterson's projection that T&N will face in excess of 40,000 claims through the year 2015. Moreover, Dr. Peterson puts the peak year for

cancer claims at 2006, which is 43% higher than what T&N actually experienced in 2001. (See Tr. at 781 (Peterson).) This increase, the PD Committee argues, is not attributable to any increase in malignant disease incidence because both the Nicholson model and the KPMG model (establishing peak mesothelioma incidence in 1997, and all cancers in 1990) do not show this continued increase. (See PD Exh. 2 at A-2; Tr. at 766-768.) Additionally, Defendant contends that the myriad of legal reforms now in effect, or being proposed, will also drive down the claiming rates of nonmalignant claims.

III. CONCLUSIONS OF LAW

A. Procedural History and Jurisdiction

On June 16, 2004, the Chief Judge of the United States Court of Appeals for the Third Circuit designated this Court to sit on the United States District Court for the District of Delaware in the Federal-Mogul bankruptcy case. On December 2, 2004, the Debtors filed a motion pursuant to 11 U.S.C. Section 105(a) for an Order (I) Clarifying District Court Judge Wolin's December 10, 2001 Order, and (II) Delineating the Respective Roles of the District Court and the Bankruptcy Court With Respect to Asbestos Estimation and Plan Confirmation Matters in these Cases, which sought withdrawal of the reference to this Court from the Bankruptcy Court of both the asbestos personal injury claims estimation and the Plan confirmation proceedings. (Docket No. 6517, Bankr. No 01-10578 (RTL).) On January 14, 2005, the PD Committee filed a statement in support of the Withdrawal Motion. (Docket No. 6830, Bankr. No 01-10578 (RTL).)

Following a hearing on January 25, 2005, this Court entered an Order that granted a withdrawal of the reference with respect to the estimation hearing pursuant to 28 U.S.C. § 157(d), but reserved decision on whether to withdraw the reference as to Plan confirmation. This Court has jurisdiction over the estimation of asbestos personal injury claims under 28 U.S.C. §§ 1334 and 157.

B. English Law Considerations

In an attempt to efficiently and thoroughly resolve the liability concerns in the United States, Plaintiffs have also submitted evidence that it hopes will provide some persuasive reference to the concurrent administration (bankruptcy) proceedings in the United Kingdom. Recently, the English solicitors for the Administrators of the English companies in the Federal-Mogul Group (the “UK Debtors”) applied to Justice David Richards of the English High Court of Justice (“Justice Richards”) for directions that concerned various issues of conflicts of law pursuant to section 14(3) of the Insolvency Act 1986. On June 9-10, 2005, Justice Richards held a hearing, in which the High Court indicated that it could be assisted on the issues after this Court renders its estimation judgment.

To that end, Ms. Barbara Dohmann Q.C. (“Dohmann”), a barrister at the Bar of England and Wales and a member of the Blackstone Chambers, provided credible and well-reasoned expert testimony as to the choice of law for liability and damages that would apply if T&N’s personal liability claims, based on events in the United States, were considered by an English court. Clearly, this Court’s consideration of the question is for

the purposes of this hearing and the pending United States bankruptcy proceedings. The interpretation of United Kingdom law for purposes of the United Kingdom administration is a matter for the United Kingdom courts.

Regarding liability, Ms. Dohmann testified that the choice of law applicable to T&N's United States asbestos personal injury claims would be governed by either the Private International Law (Miscellaneous Provisions) Act 1995 (the "1995 Act") or common law. For personal injury claims in which both the exposure and the manifestation of disease took place after May 1, 1996, the 1995 Act determines the applicable choice of law; whereas, in claims arising before May 1, 1996, pursuant to Boys v. Chaplin, [1071] AC 356, the choice of law analysis is driven by the "double actionability" test. (Tr. at 339-342 (Dohmann).) Ms. Dohmann opined that under either scenario, a Court in the United Kingdom would apply the law of the relevant United States jurisdiction to determine T&N's liability for asbestos claims asserted against it based upon exposure and injury occurring in the United States. The Court accepts Ms. Dohmann's testimony as credible and persuasive.

The damages determination, however, has generally been considered a procedural matter that is governed by the law of the forum; that is, English domestic law. (Tr. at 343-344.) Ms. Dohmann testified that several developments have called into question this premise, and that she believes that the House of Lords will ultimately determine that a United Kingdom court will also apply United States law to the quantification of damages question. First, in 2004, the Court of Appeal decided Harding v. Welands

[2004] EWCA Civ 1735, and held that under the 1995 Act a statutory cap on damages under the foreign law governing the underlying tort was a substantive matter. Ms. Dohmann testified that Harding is set to be heard by the House of Lords in the later half of 2005, and that based upon the substantial criticism of the quantification of damages rule, it is likely that they would affirm the Court of Appeal's decision. (Tr. at 347-348.). She believes that the House of Lords has demonstrated a willingness to overturn antiquated or unjust procedural rules. (Pl. FOF ¶ 67.) For example, in Miliangos v. George Frank Ltd. [1976] AC 443, the House of Lords did away with the rule that English courts could only give judgments in pounds sterling because of the currency's exchange rate fluctuations, which could be a source of injustice in those cases arising in other countries.

Second, Ms. Dohmann spoke of two decisions rendered by Australia's highest court, Régie Nationale des Usines Renault SA v. Zhang, (2003) 210 CLR 491, John Pfeiffer Pty. Ltd. v. Rogerson (2000) 203 CLR 503, which as persuasive authority, held that quantification of damages should be governed by the same law that governs liability. (See Tr. at 352-53.) In addition, she observed that the Council of the European Union has issued a draft choice of law regulation that provides, that the law applicable to the tort or delict shall be the law of the country in which the damage occurs, and the nature and assessment of damages will also be based on the laws of the country where the damage occurs. (Tr. at 349-351.)

Admittedly, the laws governing quantification of damages is in a state of transition in the United Kingdom. The PD Committee correctly established during cross-examination that as of this moment the laws of the United Kingdom would control the quantification of damages issue. Nevertheless, the Court accepts the testimony of Ms. Dohmann, and concurs with her opinion that the House of Lords will ultimately decide that United States claims against T&N would be assessed and quantified, in an English administration, under the applicable law of a United States jurisdiction, regardless of whether the claims are considered under the 1995 Act or common law.

C. Estimation in Bankruptcy

Estimation helps the court "avoid the need to await the resolution of outside lawsuits to determine issues of liability or amount owed by means of anticipating and estimating the likely outcome of these actions." Matter of Ford, 967 F.2d 1047, 1053 (5th Cir. 1992). The Bankruptcy Code states that estimation is necessary when liquidation outside of bankruptcy would unduly delay the administration of the case. 11 U.S.C. 502(c). The object of such a proceeding is to establish the estimated value of a creditor's claim for purposes of formulating a reorganization plan. Kool, Mann, Coffey & Co. v. Coffey, 300 F.3d 340, 347 (3d Cir. 2002). Although courts have disagreed about whether estimation is mandatory or permissive, it is apparent that the Bankruptcy Code requires an estimation in order to prevent undue delay in the administration of the estate.¹⁰

¹⁰ "Thus, relief for the debtor is incomplete, and those creditors are not given an opportunity to collect in the case on their claims. The proposed law [the current Bankruptcy

It is undisputed that the Personal Injury Claims are contingent and unliquidated, and that liquidation of each claim by a trial would unduly delay the administration of these cases. Moreover, the parties are attempting a plan for reorganization; thus, in accordance with the underlying principles in bankruptcy of promoting the quick and efficient administration of the estate, the estimation of the aggregate allowable amount on all United States and United Kingdom pending and future asbestos claims will be determined by this Court.

1. Purpose of an Estimation

As indicated above, the Bankruptcy Code is less than clear *when* a court should undertake an estimation process. The Code is equally vague about the purpose of estimation. Section 502(c) only speaks of estimating claims for the purpose of allowance. The language does not expressly state whether claims are estimated for voting only, for voting and confirmation only, or for all purposes including distribution into a personal injury trust.

Here, the focus is on T&N's aggregate personal injury liability for the creation of a trust, not the merits of individual or class of individuals claims. To do the latter, would require that each claimant be afforded the procedural protections of the due process clause of the Fifth Amendment, thereby requiring cases that presented disputed issues of

Code] will permit a complete settlement of the affairs of the bankrupt debtor, and a complete discharge and a fresh start." H.R. Rep. No. 95-595, at 180 (1978), 1978 U.S.C.C.A.N. 5963, 6141.

fact a trial by jury. Thus, the Court finds persuasive the recent Owens Corning v. Credit Suisse First Boston, (In re Owens Corning), 322 B.R. 719 (D. Del. 2005) case, and likewise determines that an estimation of asbestos liability for the limited purposes of plan formulation is a fruitful endeavor because it promotes the speed and efficiency goals of the Bankruptcy Code, while not implicating the procedural rights of the individual claimants. Also similar to Owens-Corning is the fact that this estimation did not involve the discovery of individual claims, but rather an inquiry focused on T&N's historical claims-handling practices, and expert testimony on trends and developments in the asbestos tort system. To do otherwise would eviscerate the purposes of the estimation process and place additional financial burdens on the very trust which the Court is trying to create.

Finally, the existence of a "Central Deal" among the Plan Proponents, and the possibility that a committee, such as the PD Committee, would be allocated a less than ideal distribution once the Plan is confirmed, is wholly ancillary to the Court's function in this estimation. Such pacts among creditor constituencies are commonplace in bankruptcies, and it makes little difference that one exists here. Ironically, the fact that the PD Committee challenges the lone estimation proffered by the Personal Injury Claimants, as a result of not being party to the Central Deal, has enabled the Court to consider more than one estimate, and observe how each expert withstands the rigors of cross-examination. In a sense, the existence of a Central Deal has aided the Court's fact-finding function.

2. Method of the Estimation

The Bankruptcy Code does not establish the manner in which contingent or unliquidated claims are to be estimated. Bittner v. Borne Chemical Co., 691 F.2d 134, 135 (3d Cir. 1982). The Third Circuit has stated that Congress intended the procedure to be undertaken initially by the bankruptcy judges, “using whatever method is best suited to the particular contingencies at issue.” Id. The principal consideration must be an accommodation to the underlying purposes of the Code. Id. In accomplishing this task, the estimating court is bound by the legal rules which may govern the ultimate value of the claim. For example, when the claim is based on an alleged breach of contract, the court must estimate its worth in accordance with accepted contract law. Id. It is, after all, a general principle in bankruptcy law that, for bankruptcy purposes, state law governs the validity and amount of a claim. See Raleigh v. Ill. Dept. of Revenue, 530 U.S. 15, 20 (2000). See also Bitner, 691 F.2d at 135 (applying same principle to estimation proceedings under § 502(c)). In addition, all claims are to be valued at the petition date. In re Owens Corning, 322 B.R. at 721-722 (citing In re Brinns Cotton Mktg., 737 F.2d 1338 (5th Cir. 1984)).

Courts in the Third Circuit have recently grappled with the manner in which an estimation should be conducted in the asbestos-bankruptcy context. In the In re ArmstrongWorld Indus. estimation, it was stated that “estimating future claims is more an imprecise art than a science, and the best way anyone can do is try to find an estimate that is not unreasonable.” In re Armstrong World Indus., Case No. 00-04471, slip. op. 48,

Docket No. 6255 (Bankr. D. Del. December 19, 2003). Indeed, an estimation by definition, is an approximation and necessarily involves comparing a known or established quantum of data to the thing being estimated.

The In re Owens Corning estimation provides a useful analog to this estimation. That estimation hearing lasted six-days and had sixteen witnesses testify: four fact witnesses testified about the company's asbestos litigation experience, three medical experts testified about the standards for the diagnosis of asbestos related diseases and the effects of the diseases, four estimation experts valued Owens Corning's asbestos personal injury liabilities, two financial experts testified about the appropriate discount rate, an expert testified about the developments in asbestos litigation, and an expert opined on a study of B-reader x-rays. The range of competing estimates of Owens Corning's liability, as testified by the estimation witnesses: \$2.08 billion (Dr. Dunbar), \$6.5 billion to \$6.8 billion (Dr. Vazquez), \$8.15 billion (Dr. Rabinowitz), and \$8.4 billion to \$11.1 billion (Dr. Peterson). The court pegged Owens Corning's liability as "somewhere in between," and consequently, assessed its liability at \$7 billion. In re Owens Corning, 322 B.R. at 725. This was in-line with other major asbestos bankruptcy estimations.¹¹

The Memorandum and Order, however, does not give a roadmap to its \$7 billion dollar figure; this, despite the enormous variations in the four estimates provided, \$2-\$11

¹¹ The estimate in the Babcox & Wilcox case was \$7.1 billion to \$9.0 billion, in Armstrong World Indus. it was \$4.7 billion to \$6.5 billion, in Raytech it was \$7 billion, and in Eagle-Picher it was \$2.5 billion.

billion dollars. This is not a criticism of that court, but rather, a recognition that each expert used a different set of assumptions and methods for determining historic levels of compensation, the values of that compensation, and how the universe of claims was evaluated.¹² Similarly, this Court is confronted with two estimates that are submitted by two well-respected experts, but are based upon radically different assumptions; indeed, like In re Owens-Corning, there is a \$9 billion dollar gulf between the expert's estimates. The In re Owens-Corning court accurately reflected on how the estimating Court should approach an asbestos claim estimation

In undertaking this comparative assessment, however, I prefer to avoid specific mathematical calculations: since mathematical precision cannot be achieved in the prediction being undertaken, it is important that we not pretend to have achieved mathematical accuracy.

In re Owens Corning, 322 B.R. at 725. The task, therefore, cannot be to simply determine which expert makes a more compelling argument as to a particular variable in their formula, insert the most credible figure, and then continue with the calculus. The task is made more difficult because the parties have spent considerable time criticizing the other expert's assumptions and the methodology used to compute each variable. After consideration of the expert reports in this matter, it is evident that the Court must make reasonable adjustments based on the record created at trial and embrace the methodology

¹² This is not uncommon. One commentator analysed the factual record in the A.H. Robbins estimation, and determined that Judge Merhige was left with nothing more than his own judgment in determining a proper estimation amount because of the different assumptions employed by each estimation expert. See Alison J. Brehm, et al., To Be, or Not to Be: The Undiscovered Country of Claims Estimation in Bankruptcy, 8 J. Bankr. L. & Prac. 197 (1999).

it finds more reliable, while remaining vigilant to the potential bias that a party's expert may have on his or her estimation figures.¹³

To start, a workable framework was developed in In re Eagle Picher, 189 B.R. 681 (Bankr. S.D. Ohio 1995), wherein the court set out what an estimating court should consider in the asbestos estimation process. In consideration of all pre-petition, unpaid claims, the only sound approach is to begin with what is known; namely, the data in the T&N Database. Id. at 686. This Court did not conduct an independent analysis of the T&N Database; rather, it relied upon the testimony of the estimation experts. To attempt an estimation without utilizing information known about these debtors and their history in the handling of claims which have been asserted against them in the past, and their disposition, is to ignore a valuable resource. Id. From the database it is possible to associate with each claim characteristics such as occupation of the claimant, nature of the disease, the amount which was paid to the claimant, as well as a number of other factors. Id. Because much of the same information is known about the unpaid, pre-petition claims (pending claims), though, of course, not the settlement amount, it is possible to ascertain with some degree of accuracy what the settlement figures for those claims would be had they been resolved pre-petition. Id.

¹³ Dr. Peterson presented the highest estimate in the Owens Corning Estimation, and unlike that estimation, Plaintiffs have decided not to present more than one estimation expert. Notably, the In re Owens-Corning court, however, found two other experts most credible and stated, "Dr. Vasquez and Dr. Rabinovitz are, in my view, about equally persuasive. Both have attempted, and largely succeeded, in adjusting historical figures to reflect changed circumstances." In re Owens Corning, 322 B.R. at 725.

In the realm of future claims, the Eagle Picher court set forth seven considerations that should drive the estimate:

1. The estimate should be primarily based upon the history of this company, particularly because there was no definitive showing of another or other company's production of a product line identical to that of debtors. This consideration does not, however, rule out the desirability of considering trends general to the industry, *particularly regarding the rate of filing of claims*.
2. The total number of claims to be expected should be estimated.
3. The estimation of claims should categorize them by disease and occupation, as well as other factors.
4. Valuation of claims should be based upon settlement values for claims close to the filing date of the bankruptcy case.
5. A reasonable rate for indemnity increase with time must be determined so that a future value of filing date indemnity values can be comparable.
6. A lag time gleaned from the tort system must be determined in order that there be accuracy in projecting future values.
7. A discount rate must then be applied in order to bring the future nominal value of claims back to the filing date.

Id. at 690-91. Both parties cite to In re Eagle-Picher, and this Court finds its framework persuasive.

D. T&N's Legal Liability for Asbestos Personal Injury Claims

Despite the significant difference in estimates, there are some areas where Dr. Peterson and Dr. Cantor agree. Both generally agree on the number of historical claims filed, and an approximate value of unpaid, unresolved pending claims. Also, each expert "transitions" the data for those claims that were unspecified in the T&N Database. In

addition, the experts both derive a “nonmalignant multiplier” for projecting the number of future nonmalignant claims as a multiple of cancer claims; namely, Dr. Peterson uses 10.2 for his Increasing model and Dr. Cantor uses 12.9. They both generally agree on the historical dismissal rates, which they both use to determine the number of pending and future claims that will be compensated. This Court has determined, after considering the evidence and the testimony of the experts, that Dr. Peterson’s estimate comes closest to the criteria enumerated in In re Eagle-Picher.

1. Number of Pending and Future United States Claims

Dr. Peterson and Dr. Cantor both testified that the number of pending claims, including those that have been settled but not yet paid, or resolved, total approximately 135,000 claims. This figure represents the total number of unpaid claims that were pending as of the Petition Date. Thus, those claims that are deemed “settled but not yet paid” or “settled but not yet documented” must be included in the overall number of pending claims.

Pursuant to the first factor of Eagle Picher, the focus must be on T&N’s actual settlement history in determining what a claim would have been worth but for the bankruptcy. Greater weight must be placed on the nine months of data, when T&N was a stand-alone defendant, because that is most indicative of what a claim would have been worth but for the bankruptcy. Understandably, it is inherently problematic to create a long-term estimate based on a shorter period of time; however, a trend must be grounded in legal reality, sometimes at the expense of statistical principles. Both experts provided

the Court with historical comparisons from other asbestos defendants. It is appropriate here, especially in the case of T&N, to accord some weight, “particularly to the rate of filing” as to other similarly situated asbestos defendants. See In re Eagle Picher, 189 B.R. at 690. The breadth of T&N’s asbestos containing products, as demonstrated by its board membership in the CCR, would make a side-by-side comparison to other asbestos defendants, for other purposes, less helpful.

In projecting the number of future claims, the Court finds Dr. Peterson’s forecast more reliable because it best depicts the short-term increase in overall claims filings that T&N experienced when it left the CCR. The PD Committee’s position, that the establishment of the CCR, and the ACF, likely facilitated the process for potential claimants to bring suit against the defendant members, and therefore, likely resulted in an increase in the number of claims filed is well taken. The testimony of Hanly and Dr. Peterson, however, indicated that this phenomena was nullified by the Georgine class action litigation, which chilled claims filing.

The experience of Union Carbide, which also left the CCR in 2001, demonstrates that when it left the CCR the claiming rate increased. In 2001, Union Carbide had 73,806 claims filed against it, then, 121,916 in 2002, and 122,586 in 2003. (Tr. at 1169 (Cantor).) The juxtaposition of these events, leaving the CCR and an increase in claim filings, does not mean these events are causally related. Rather, and in agreement to projections of Dr. Peterson based upon the forecasts of cancer incidence in the Nicholson study, it means that the incidence of disease was going up. The PD Committee correctly

notes that in 2004 Union Carbide's filing dropped to 58,240; however, all of the Union Carbide data was taken from the company's Form 10-K filing and reported in accordance with GAAP.¹⁴ Therefore, Union Carbide's numbers in 2004, and the years 2001-2003, are likely understated.

By comparison, Dr. Cantor forecasts the total number of compensable claims in 2004 for T&N at 21,970, which is on a marked downward trend from the filings in 2001. All speculation aside, Hanly testified that T&N experienced a significant increase in the number of claims, with a sharp rise in mesothelioma and lung cancer claims. (Tr. at 79-82 (Hanly).) Mr. Hanly's testimony and the Union Carbide experience supports to some degree, but not completely, the short term increase in filings suggested by Dr. Peterson.

Further, the mesothelioma incidence peak of 2002 suggested by Dr. Cantor and Dr. Weill is less persuasive than the Nicholson study, relied upon by Dr. Peterson. The Nicholson study more accurately matches the incidence of mesothelioma deaths reported by the National Cancer Institute's SEER data, than does the alternative projections by KPMG or NCI. The Court gives greater weight to the SEER's projections because a government report would likely contain less bias than a private consulting company. Dr. Welch and Dr. Weill testified that there are currently 2,800 new cases of mesothelioma in men, and several hundred in women. (Tr. at 270-271 (Welch); Weill Tr. at 118-119.) For

¹⁴ The reporting requirements under generally accepted accounting principles ("GAAP") relating to filings to the Security and Exchange Commission have purposes that are largely divergent from the estimation of liability for a personal injury trust.

example in the years 2000-2004, the Nicholson forecast of approximately 3,000 cases per year (men and women) conforms more closely than the approximately 2,500 new cases in the KPMG model and the approximately 1,800 new cases in the Navigant model.

Plaintiff also demonstrates that if SEER's age adjusted incidence data (two cases of mesothelioma per 100,000 males) is applied to the 2003 census data (140 million males), they yield approximately 2,800 new cases of mesothelioma. (See Pl. Response at 18 n.6.)

Further, both medical experts testified that changes in mesothelioma incidence is probably the clearest measure of other asbestos related disease. Indeed, both experts use the mesothelioma incidence to compute their respective nonmalignant multipliers. Dr. Cantor's use of untransitioned data in her forecast of nonmalignant claims, which demonstrates flat or decreasing incidence for nonmalignant claims, appears in direct contradiction to both medical experts, who, are better equipped to understand the dose-response studies. Admittedly, not every asbestos-related claim in the United States can be attributable to T&N; yet, Dr. Peterson's estimated number of claims based upon all of the Nicholson industries is more reliable in light of the entire T&N product line, not just the exposures from the Limpet product. Nevertheless, the Court is reluctant to give wholesale acceptance to Dr. Peterson's increasing nonmalignant assumption-- that the ratio of nonmalignance to cancer claims will be about 11 percent greater than the base period (see Pl. Exh. 2 at 36.)--because the T&N data, and Dr. Cantor's analysis, cast some doubt about the sufficiency of this theory. Dr. Peterson states that the increasing nonmalignant assumption was based upon the general experience of asbestos defendants

in the 1990s; specifically, he relied on the filing experience of the Manville and UNR trusts. (Id.) The use of this historical data from other asbestos defendants, to predict a corresponding 11 percent increase in the nonmalignant ratio for T&N, is not persuasive; especially, since the testimony from both estimation experts characterize the ratio as being relatively stable.

Also, Dr. Peterson's method of counting the claims filed in a given year is a more appropriate method for forecasting future claims than a "death year" approach. Dr. Cantor imputed a death year to claimants in her four year calibration period by making the payment date a proxy for the date of death. Because the claim payment date is on average two years or more longer than the date of death, it is argued that Dr. Cantor's calibration period does not consider: (1) persons who made claims against T&N, but have not yet died, and (2) persons who have died before the Petition Date, yet filed claims afterward. The Court finds credible the criticism of Dr. Cantor's death year methodology because it ignores over 30 percent of the cancer claims made during the calibration period. Indicative of this was Dr. Cantor's 2002 projection of a mere 660 compensable mesothelioma claims, a 40 percent drop from the year before. This estimate is not supported by either T&N's claims history, any epidemiological model, or events after the Petition Date. Consequently, Dr. Cantor's nonmalignant claims filings, derived from the incidence of cancer claims, is understated.

Lastly, there is a fundamental disagreement about the affect that certain changes in the United States tort system will have on claims *filings*. The PD Committee asserts that

tort reform will reduce claims filings. (PD Response at 6). This Court cannot, and will not, speculate about the effect these market changes will have on *settlement averages*.

What is critical is the recognition that filings and settlements are two distinct variables in the equation. Therefore, the safest and surest predictor of filings must be tied to an epidemiological model that forecasts incidence of disease, and not on whether a particular claimant makes a decision to file a complaint. As such, the only rational theorem that can be stated is that where there is more asbestos incidence, one can expect more filings, and vice versa.

2. Settlement Averages for United States Claims

No one can dispute that T&N's settlement averages would be higher when they filed for bankruptcy, as a stand alone defendant, than they were as a CCR member. According to Hanly, the CCR's share allocation process allowed T&N to pay far less in aggregate because the cost savings and reduced claims settlements more than offset the cost of paying those claims that T&N might not have paid outside the CCR. (Tr. at 77-78 (Hanly).) The mere fact that twenty of the United States's largest asbestos defendants sought refuge in the CCR indicates that it was a cost-wise endeavor. This is especially true in the case of T&N, as it faced one of the largest liability exposures of all the CCR members. Once the CCR became less cost efficient, T&N left. T&N's Chief Financial Officer, Michael Lynch, testified that it became very apparent soon after they left, that the costs were going to be greater than what they were in the CCR. (5/25/05 Lynch Dep. at 96-97.) Additional support for the post-CCR phenomenon, and conceded to by Dr.

Cantor, was Union Carbide's post-CCR experience whereby it saw its total indemnity costs go from \$39 million in 2001 to \$155 million in 2002, \$293 million in 2003, and eventually \$300 million in 2004. (Tr. at 1168-1170 (Cantor).) This rate of increase is telling.

Dr. Cantor, in her analysis, uses a four year rolling average, based upon three years of T&N's settlements as a CCR member, and one year as a stand alone defendant. As previously noted, using more years, rather than less, is a more accurate method for forecasting a long-term average. Yet, Dr. Cantor's methodology does not fully reflect the undeniable trend that T&N was paying more to settle cases when it left the CCR. Conversely, Dr. Peterson considered the settlements in the CCR, but largely based his resolution amounts on T&N's nine months as a stand alone defendant, and then, calculated settlement amounts based on a trend. Dr. Peterson also testified that he consulted with Hanly, plaintiff and defense attorneys, and the trends occurring in the asbestos litigation as a whole. Dr. Peterson testified that his experience allowed him to recognize, and adjust for, statistical anomalies such as the 10,700 Mississippi premises liability claims that settled for \$300.00 each. On the other hand, Dr. Cantor's estimate did not factor out these anomalies, and it became apparent on cross-examination that her knowledge about the United States tort system was less than ideal.

Defendant's argument that Dr. Peterson's used inflated TDP values oversimplifies the process that Dr. Peterson used in reaching that result. The Court will not devote as much space to rejecting this argument as it took to summarize his four-step process in

Part II.F.2, infra. It is sufficient to say that Dr. Peterson testified that because the TDP values were very comparable, if not lower, he erred on the side of conservatism and used the TDP values as the settlement amounts for future claims. (Tr. at 437-438 (Peterson).) It is from the TDP figures that Dr. Peterson derived the average resolution amounts. Furthermore, Dr. Peterson retested his resolution amounts against the T&N Database, in the time between his report and the trial, and testified that they were very close to the 2001 values that he used in his Increasing model. (Tr. at 433.) While the number of claims might vary greatly from one asbestos defendant to another, it is logical to assume that there is more of a “market rate” as it relates to settlement averages by disease. Thus, Dr. Peterson’s methodology is more convincing, and therefore, it is afforded greater weight.

A note must be made about problems in the United States tort system, as it relates specifically to asbestos personal injury litigation, which purportedly have inflated *claim resolutions* in the past. Many of these factors were listed by the In re Owens Corning court, which stated that, “Some of the past results have been skewed by factors which can and should be avoided in the future. The question to be resolved is the extent to which adjustments should be made to historical values to account for these probable changes.” In re Owens Corning, 322 B.R. at 723. The factors mentioned by the court include: (1) venue shopping; (2) mass screenings “which triggered thousands of claims by persons who had never experienced adverse symptoms”; (3) erroneous x-ray interpretations by “biased” plaintiff doctors; (4) overpayment to claimants who were “unimpaired”; (5)

grouping more serious injuries with unimpaired claimants resulting in higher verdicts; (6) global settlement programs that overvalue less meritorious cases; and (7) settlements that were impacted by the threat of punitive damages. Id. These are general allegations and their truth here is not conceded. In addition, the record before us does not supply the factual support necessary to intelligently quantify their effect.

The uncontroverted evidence at trial demonstrated that the market factors that allegedly drove up historic claim resolutions were counterbalanced by other factors, which Hanly testified, were considered by T&N in its settlements values. These included the strength of exposure evidence, strength of medical evidence, identity of plaintiff's doctor supplying the diagnosis, identity of plaintiff's counsel, jurisdiction where case was pending, plaintiff's ability to get a trial date; plaintiff's economic damages, and the history of asbestos defendants in the jurisdiction. (Tr. at 79-80, 92 (Hanly).)

Furthermore, after it left the CCR, T&N paid out a several share of its liability and did not factor in what a claimant might or might not get from another asbestos defendant. (Tr. at 76-77 (Hanly).) Also, Hanly testified that the threat of punitive damages was not factored into the equation. (Tr. at 92, 102.) In fact, T&N has only faced one punitive damages verdict in its history (March 2001), which was bonded and paid in 2004 and not included in the T&N database. (Tr. at 92.) Dr. Peterson convincingly concluded that factors listed in In re Owens Corning had no impact on his forecast because based upon the uncontradicted testimony of Hanly, and reflected in the T&N Database, they were already considered in the T&N settlement history.

As stated above, the Court will not attempt mathematical precision in this estimate. It would be impracticable, if not impossible, to weigh all of the factors that have influenced asbestos personal injury litigation in the United States, make adjustments, and then reach a well-reasoned conclusion that differs from what the market has told us a claim is worth. The market is just that, a market; as such, it would not be prudent to second-guess the historic resolutions that were driven by factors by *both* plaintiffs and defendants, and relied upon here by competent experts in formulating an estimate. Consequently, Dr. Cantor's suggestion that pending tort reform will drive down the average settlement costs is not persuasive. Dr. Peterson's forecast is more representative of what the tort system would pay a personal injury claimant in the future.

3. Aggregate Liability in the United Kingdom

Dr. Peterson's report addresses the estimation in the United Kingdom, with the same reasoned approach demonstrated in his analysis of United States claims. (See PD Exh. 2 at 47-53.) There was no rebuttal expert report on these claims, nor was significant attention paid this issue in the estimation hearing. As such, for the purposes of this estimation, the £229 million is deemed the amount of T&N's aggregate asbestos-related personal injury, or death, liability in the United Kingdom.

4. Interest and Inflation

Because of the tremendous amount of money involved, the present value calculations should be given more than just a passing treatment. Both Dr. Cantor and Dr. Peterson understood their respective discount rates to be "risk free." The Court accepts

their testimony. There are two phenomena which impact the ultimate value of liability. First, discounting to present value is a means of arriving at the amount of money that will produce the lost future benefits if the lump sum award is invested at prevailing interest rates. Second, it is well-understood that inflation means that the purchasing power of a dollar today, will probably have a decreased purchasing power at the time of the dollar's theoretical use in the future. In general, plaintiffs will try to project lower future interest rates than will be suggested by defendants; here, Dr. Peterson suggests a 5.02 rate and Dr. Cantor offers a rate of 5.5. Similarly, plaintiffs will usually testify to increasing rates of inflation, whereas defendants can be expected to project a more stable economy; thus, Dr. Peterson offers a 2.5 percent inflation rate and Dr. Cantor predicts a rate of 2.2.

The United States Supreme Court has explored the extent to which the likelihood of future inflation may be considered in calculating the present value of awards. In St. Louis Southwestern Ry. Co. v. Dickerson, 470 U.S. 409 (1985), the Court stated that "[it is] clear that no single method for determining present value is mandated by federal law and that the method of calculating present value should take into account inflation and other sources of wage increases as well as the rate of interest." The Court observed that the best method for calculating the approximate present value of an award for loss of future earnings could become the subject of reasonable debate in almost any case. See Jones & Laughlin Steel Corp. v. Pfeifer, 462 U.S. 523 (1983). There, the Court declined to adopt any specific mathematical formula as a method for calculating lost future earnings; yet, the Court did set forth general considerations for calculating and proving

lost earnings. The options mentioned were:

- (1) calculate the lost income stream by excluding the effects of inflation and the "real" interest rate by fixing the difference between the market rate of interest and the anticipated rate of inflation,
- (2) calculate the size of the lost income stream by including the effects of inflation and discounting by the market interest rate, and
- (3) calculate the value of pecuniary damages by employing a zero discount rate (the total offset approach).

The last option was considered unacceptable as a uniform method to calculate damages, although it could be stipulated to by the parties, or applied by the trial court in an appropriate case. Cf. Barnes v. United States, 516 F. Supp. 1376 (W.D. Pa. 1981) (applying offset approach) aff'd 685 F.2d 66 (3d Cir. 1982). After examining a plethora of economic studies, the Jones & Laughlin Steel Corp. Court concluded as to the "real" interest rate option that, "Although we find the economic evidence distinctly inconclusive regarding an essential premise of those approaches, we do not believe a trial court . . . should be reversed if it adopts a rate between 1 and 3% and explains its choice."

Unlike the In re Owens Corning estimation, the parties have not presented an economic expert to opine on long-term inflation and interest rate trends.¹⁵ Moreover, the estimation experts that have used their respective rates in calculating total liability do not provide their calculations, and even if they did, each expert's present value calculation represents a different time period for when the discount is made-Dr. Peterson forecasts out to 2039, and Dr. Cantor forecasts to 2054.

¹⁵ The Court takes note that Plaintiffs did submit a Rebuttal Report of Lorreto T. Tersigni, CPA, CFE [Docket No. 32, Civ. No. 05-59(JHR)] before trial; however, Mr. Tersigni did not testify, nor was his report moved into evidence.

As a result, the Court determines that the real interest rate approach is preferable here because continuing inflation is an economic reality, and it will remain so in the foreseeable future. Thus, it is a factor which cannot be ignored when assessing damages for future claimants. While predicting future inflationary trends, or extrapolating from present ones, may be speculative, so are most predictions courts make about future incomes, expenses (as, for example, in the case of the wrongful death of an infant). Since it is still more probable that there will be changes in the purchasing power of the dollar in the future, it is better to try to predict them rather than to ignore them altogether. United States v. English, 521 F.2d 63, 75 (9th Cir. 1975). Under the real interest rate approach the discount rate is adjusted for inflation, and the rate is then determined by subtracting the average annual change in the consumer price index over a period of years from the effective annual interest on government bonds held during the same period. The objective of the method is to determine the "real" yield of money: that portion of interest charged on virtually risk-free investments that represents only the real cost of money and not the additional cost the lender charges as a hedge against inflation. See Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d 30 (2d Cir. 1980).

Here, both Dr. Cantor's and Dr. Peterson's estimates took into account inflation by increasing the claim values by their respective inflation rate each year. Next, a risk-free discount rate must be chosen. At first glance, the difference between a rate of 5.02 (Peterson) and 5.5 (Dr. Cantor) does not look substantial. However, Dr. Peterson considered the discount rate effects in one of his twenty sensitivity analyses, and

concluded that a half-point increase in the discount rate decreases the net present value of T&N's liabilities by about five percent, or approximately \$500 million of his \$11.1 billion Increasing estimate. (PD Exh. 2 at 63.) The Court takes judicial notice that the Board of Governors of the Federal Reserve System reported the 30 Year Treasury Constant Maturity Rate in October 2001 at 5.32 percent. See <http://www.federalreserve.gov/releases/H15/data/m/tcm30y.txt> (last visited August 2, 2005). Therefore, the estimate should reflect this discount rate and also come to some middle ground as to each expert's adjustment for inflation.

5. Conclusion

The Court places more reliance on the methodology and testimony of Dr. Peterson and concludes that Dr. Peterson's estimate more closely satisfies the criteria established in In re Eagle Picher. However, the reliance is tempered by the Court's consideration of the criticisms levied by the PD Committee of Dr. Peterson's Increasing model. In addition, the Court cannot ignore the lack of funding that has befallen numerous asbestos personal injury trusts, and was persuaded by the testimony that indicated that the asbestos containing products manufactured, distributed, marketed, and mined by T&N reached countless United States' job sites and affected hundreds of thousands of persons. It is for these reason that a figure between Dr. Peterson's No Increasing estimate (\$8.2 billion) and his Increasing estimate (\$11.1 billion) is reasonable and in keeping with the purposes of 11 U.S.C § 502(c).

In consideration of the all submissions of the parties, the testimony in the courtroom, and the relevant law, the Court, pursuant to 11 U.S.C. § 502(c), estimates Turner & Newall's total liability for asbestos-related personal injury or death, both pending and future claims, in the United States at \$9 billion, and in the United Kingdom at £229 million. An accompanying Order follows.

/S/ Joseph H. Rodriguez
JOSEPH H. RODRIGUEZ
United States District Judge

Dated: September 13, 2005